



**LONGBOARD®**  
INSPIRING FACADES

# ENDURA CEILING SYSTEM

## INSTALLATION GUIDELINES



## 1.0. GENERAL

### 1.1. Product Description

Longboard® Endura Linear is an extruded aluminum closed joint acoustical ceiling system. Planks are available in standard lengths of 24' (7.3m) and widths/profiles of 4" V-Groove, 6" V-Groove and 6" Channel. Components are 12' (3.7m) lengths, used for end captures such as around the perimeter of the installation as well as around penetrations and openings. 2-½" (63.5mm) V-Groove Perforated (12' (3.7m) lengths) are used where higher NRC ratings are needed (see 1.6.)

### 1.2. Installation Considerations

Depth of system (measured from substrate to finished face):

Components = 9/16" (15mm) *\*this is the total depth of the system*

Planks = 1/2" (12mm)

Radiused ceilings (eg: barrel vault): 15' (4.6m) minimum radius (contact Longboard for tighter radii details).

### 1.3. Cutting

⚠ Always be sure to wear appropriate PPE: eye & hearing protection.

Use standard wood-cutting tools such as a Table Saw & Miter Saw with a carbide blade (60-80 tooth) for non-ferrous metals (aluminum), Jig Saw, Hole-Saw & drill for attachments.

Cut planks to the midpoint coverage area of components, to allow for any potential expansion & contraction (see 1.4.1.). Trim the taped ends of all stock length material by 1/2" (12mm) each end and discard (see 1.5.).

### 1.4. Fastening

Components should be hard-fastened\* every 16" (406mm) O.C. directly through the flange.

*\*#8 pan-head self-drilling screws (not included) are recommended*

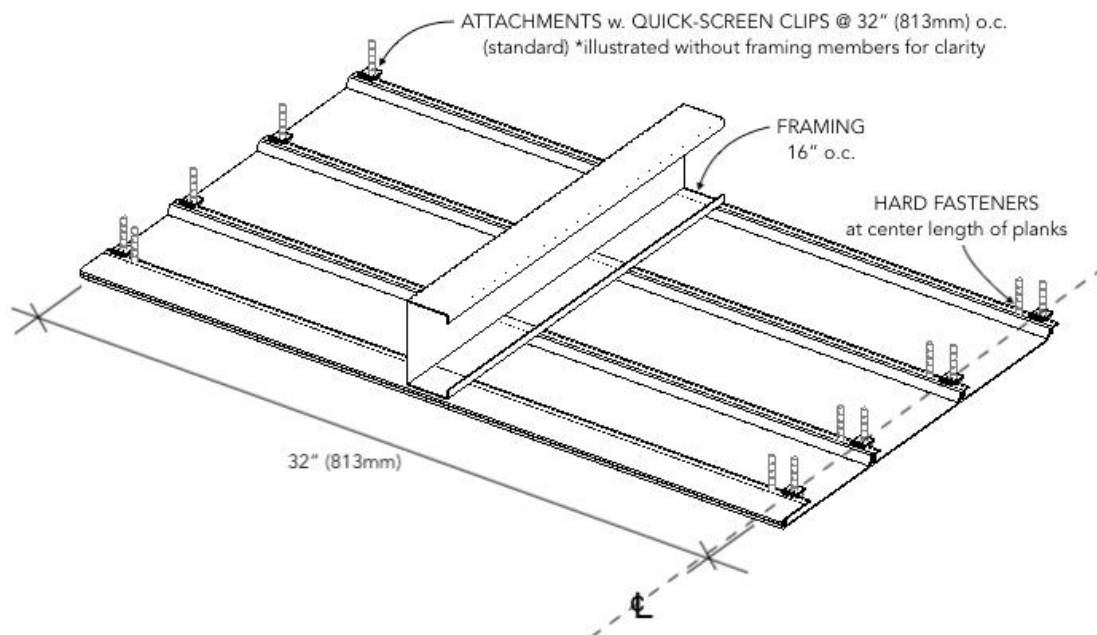
Planks are secured using Longboard Quick-Screen Clips (included for standard 32" (813mm) O.C.) fastened to the substrate with screws\*.

*\*#8 pan-head screws (not included) are recommended*

⚠ All fasteners should be compatible with the substrate type.



**TIP!** It is good practice to hard-fasten each plank directly through the flange, near the center of each length to keep the planks from migrating.



**⚠** If installing with staggered butt-joints, hard-fasten the two planks at the butt-joint to ensure joints do not open up (see Detail A&B). Fasteners should be anchored into a solid secure framing member, blocking, furring strip or backer plate\* etc. (\*see Detail B). Use touch-up paint pens (purchased separately) to finish the ends of the two (2) planks at the butt-joint.

DO NOT hard fasten more than one (1) location per plank:

Butt-joints: at the joints

No butt-joints: center of planks

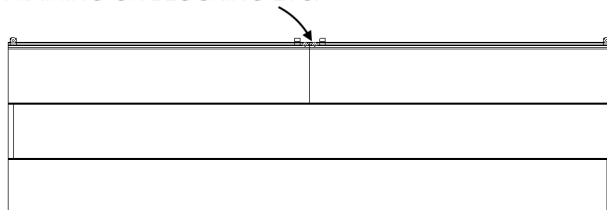
DO NOT install more than one (1) butt-joint between two components

DO NOT hard fasten a plank to a component trim, as this will restrict its ability to expand & contract into the component

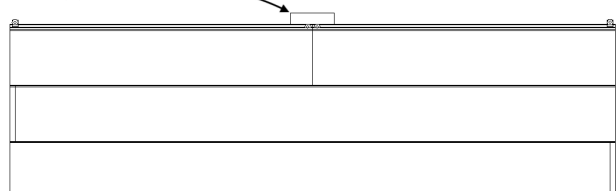
Detail A:

Detail B:

HARD FASTENERS PLACED AT END OF EACH OF THE TWO (2) PLANKS, SECURED INTO SOLID SECURE FRAMING OR BLOCKING ETC.



STARTER SPANNING BUTT-JOINT AS BACKER. HARD FASTENERS PLACED AT EACH END OF THE TWO (2) PLANKS



### 1.4.1. Expansion & Contraction

When installed in applications where temperatures will vary, Planks & Components expand & contract 1/4" (6mm) over 24' (7.3m) in all directions, measured over a 30°C (54°F) temperature range. The following expansion components should be installed every:

24' (7.3m)\*: Traditional Flat Reveal Set, Traditional U-Reveal Set

\*40' (12.2m) max. where staggered butt-joints are used

12' (3.7m): Craftsman U-Reveal Set

6' 8" (2m): Precision Flat Reveal

Each plank must terminate into a minimum of one (1) component to allow for expansion & contraction.

See **3. System Installation** for layout details and tables below for expansion/contraction calculations per foot/meter of material.

TABLE 1 - IMPERIAL													
AVERAGE TEMPERATURE AT TIME OF CUTTING & INSTALLATION													
°C		-50	-40	-30	-20	-10	0	10	20	30	40	50	
°F		-58	-40	-22	-4	14	32	50	68	86	104	122	
MIN/MAX POST CONSTRUCTION TEMP.	°C	°F	EXPANSION OR CONTRACTION (INCH/FOOT)										
	-50	-58	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019	-0.022	-0.024	-0.027
	-40	-40	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019	-0.022	-0.024
	-30	-22	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019	-0.022
	-20	-4	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019
	-10	14	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016
	0	32	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014
	10	50	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011
	20	68	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008
	30	86	0.022	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005
40	104	0.024	0.022	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	
50	122	0.027	0.024	0.022	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	

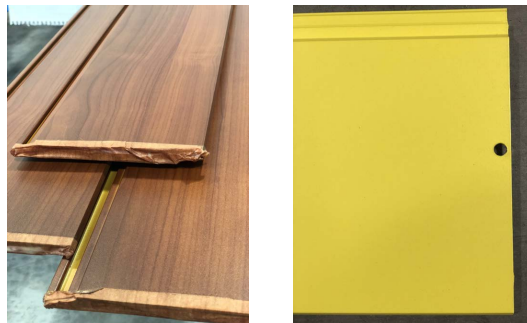
TABLE 2 - METRIC													
AVERAGE TEMPERATURE AT TIME OF CUTTING & INSTALLATION													
°C		-50	-40	-30	-20	-10	0	10	20	30	40	50	
°F		-58	-40	-22	-4	14	32	50	68	86	104	122	
MIN/MAX POST CONSTRUCTION TEMP.	°C	°F	EXPANSION OR CONTRACTION (MM/METER)										
	-50	-58	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610	-1.840	-2.070	-2.300
	-40	-40	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610	-1.840	-2.070
	-30	-22	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610	-1.840
	-20	-4	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610
	-10	14	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380
	0	32	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150
	10	50	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920
	20	68	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690
	30	86	1.840	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460
	40	104	2.070	1.840	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230
	50	122	2.300	2.070	1.840	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000

## 1.5. Surface Finish

The Longboard Endura Linear system is available in a range of Woodgrain, Solid & Specialty Finishes with custom\* solid colors available upon request. *\*Additional lead times apply*

Longboard Woodgrains have a repeat pattern, shipped in sets mated back-to-back in each box. Install these as they come out of the box, as an A&B pattern staggering each plank approx. 1-2' (305-610mm) from the previous plank to achieve a random pattern aesthetic.

All Longboard Products are produced 1" (25mm) oversized, as one end is hole-punched (all finishes) and both ends have 1/2" (12mm) of masking tape (woodgrains only) which must be cut off for best results.



## 1.6. NRC Acoustic Performance

Visit [longboardproducts.com/testing](https://longboardproducts.com/testing) for full NRC Test Reports.

Table 3

NRC ACOUSTICAL PERFORMANCE SUMMARY						
PLANK PRODUCT:	SOUND ABSORPTION COEFFICIENT				SOUND ABSORPTION	
	250Hz	500Hz	1000Hz	2000Hz	NRC	SAA
6" V-GROOVE	0.30	0.14	0.06	0.03	0.15	0.12
6" V-GROOVE with insulation	0.25	0.12	0.04	0.02	0.10	0.11
2-1/2" V-GROOVE PERFORATED	0.02	0.02	0.03	0.09	0.05	0.03
2-1/2" V-GROOVE PERFORATED with insulation	0.22	0.73	0.96	0.97	0.70	0.72
<p>- The test reported in this document conformed explicitly with ASTM C423-17: "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method."</p> <p>- The specimen mounting was performed according to ASTM E795-16: "Standard Practices for Mounting Test Specimens During Sound Absorption Tests."</p> <p>- Insulation refers to Fiberglass backer @ 2.92 lbs/ft<sup>3</sup> (46.7 kg/m<sup>3</sup>) with a thickness of 1" (25.4 mm)</p> <p>- The sound absorption average (SAA) is defined in ASTM C423-17 Section 3.1.1 as the arithmetic average of the sound absorption coefficients of a material for the twelve one-third octave bands from 200 Hz through 2500 Hz, inclusive, rounded to the nearest integer multiple of 0.01.</p> <p>- The noise reduction coefficient (NRC) is defined from previous versions of ASTM C423 as the arithmetic average of the sound absorption coefficients at 250 Hz, 500 Hz, 1000 Hz, and 2000 Hz, rounded to the nearest integer multiple of 0.05.</p>						

## 1.7. Material Ordering & Delivery

Planks are sold in box quantities:


6" V-Groove & 6" Channel: 96 SQ FT/Box (8/24's) w. 90pcs Quick-Screen Clips included\*

4" V-Groove: 96 SQ FT/Box (12/24's) w. 135 Quick-Screen Clips included\*

(\*for 32" (813mm) o.c. attachment)

Components are sold individually by the 12' (3.7m) length.

Lead time is 3-6 business days\* + shipping (\*subject to change), delivered on 24' (7.3m) long skids weighing up to 2000 lbs. A mechanical lift with forks is required on site to receive the order.

 Always inspect the delivery for damage and contact LB ASAP if there are any issues: [info@longboardproducts.com](mailto:info@longboardproducts.com) or 1-800-604-0343 and include your PO# and any pictures if possible. Mark the delivery receipt as "damaged" and accept the delivery as-is. Longboard is not responsible for the installation of blemished or damaged material.

## 1.8. Storage & Handling

Be sure to store the material flat, keep it dry, safe & secure and remain in unopened cartons until ready to be installed. Ensure proper care when handling, to avoid damage on site.

## 2.0. FRAMING REQUIREMENTS

### 2.1. General

Always consult the local building authority and follow local building code requirements.

### 2.2. Load Capacity

The Longboard Endura Linear system weighs approx. 1.5lbs/sq.ft. *\*see section drawings for individual item weights.*

#### 2.3.1. Wood-Framing

Traditional ceiling framing at 16" O.C. (406mm) with or without solid secure blocking\* running perpendicular to the plank orientation.

*\*typically required for perpendicular ceiling applications*

#### 2.3.2. Metal Framing

18ga. (minimum) galvanized steel framing at 16" O.C. (406mm).

#### 2.3.3. Concrete

Wood or metal furring strips (see 2.3.1. and 2.3.2. for standard requirements).

### 2.4. Framing Layout

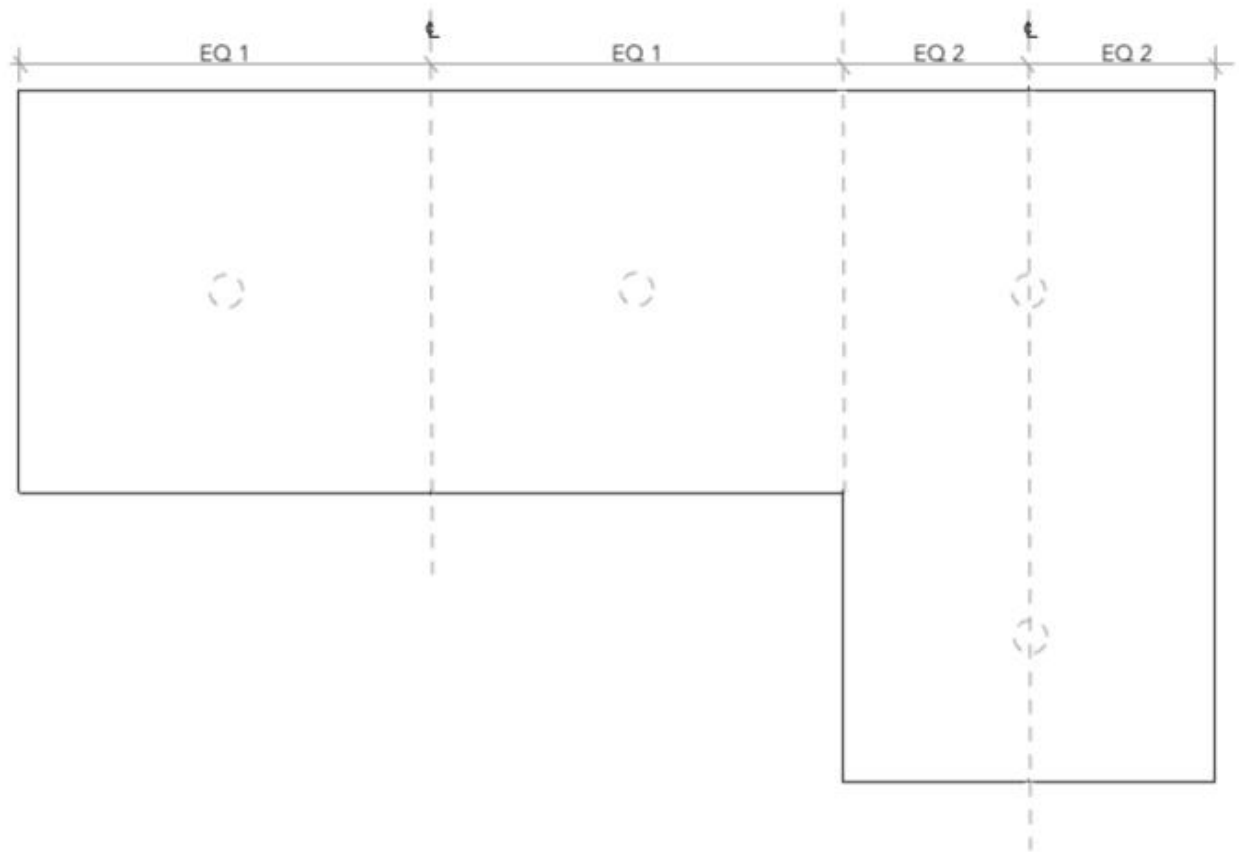
Provide solid secure framing and/or blocking at 16" O.C. (406mm) for material support and attachment at 32" (813mm) O.C. (standard requirements). Where reveal trims are used; ensure all components land on a stud, blocking or 5/8" (16mm) wood sheathing is used.

### 3.0. SYSTEM INSTALLATION

#### 3.1. Layout

Measure and layout your ceiling area to consider plank & component alignment with lighting fixtures, penetrations and adjacent walls, for the desired appearance.

(drawings shown as reflected ceiling plan)



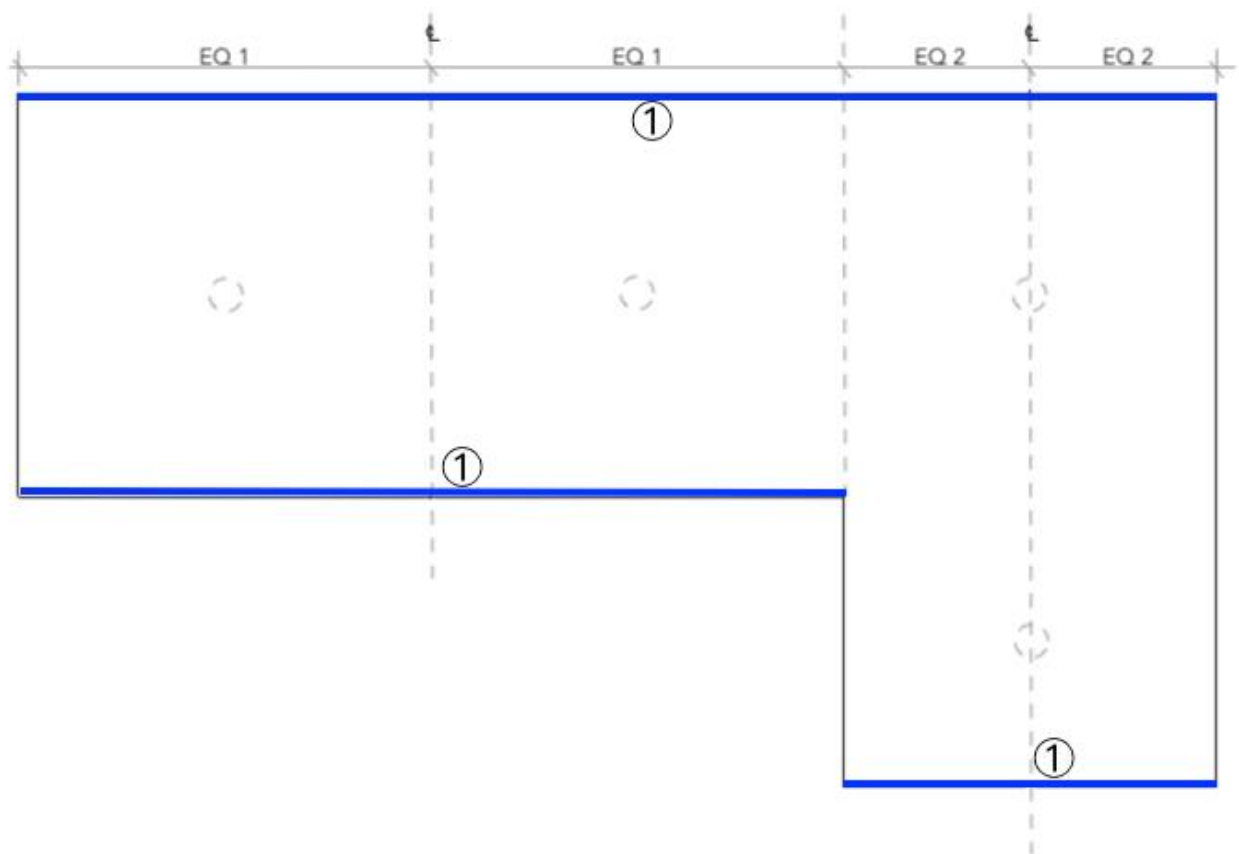
### 3.2. Component Installation

If the area to be installed will experience temperature change, it is good practice to leave a 1/4" (6mm) gap between every 2nd joint or 24' (7.3m) of all components, to allow for expansion & contraction. Consider the preferred joint method where components meet each other, to dictate which component is installed first (eg: right angle butt joints, mitered joints etc.).

*\*see Appendix for material details or website for full info section drawings.*

#### 3.2.①. - J-Track/Two Piece J-Track

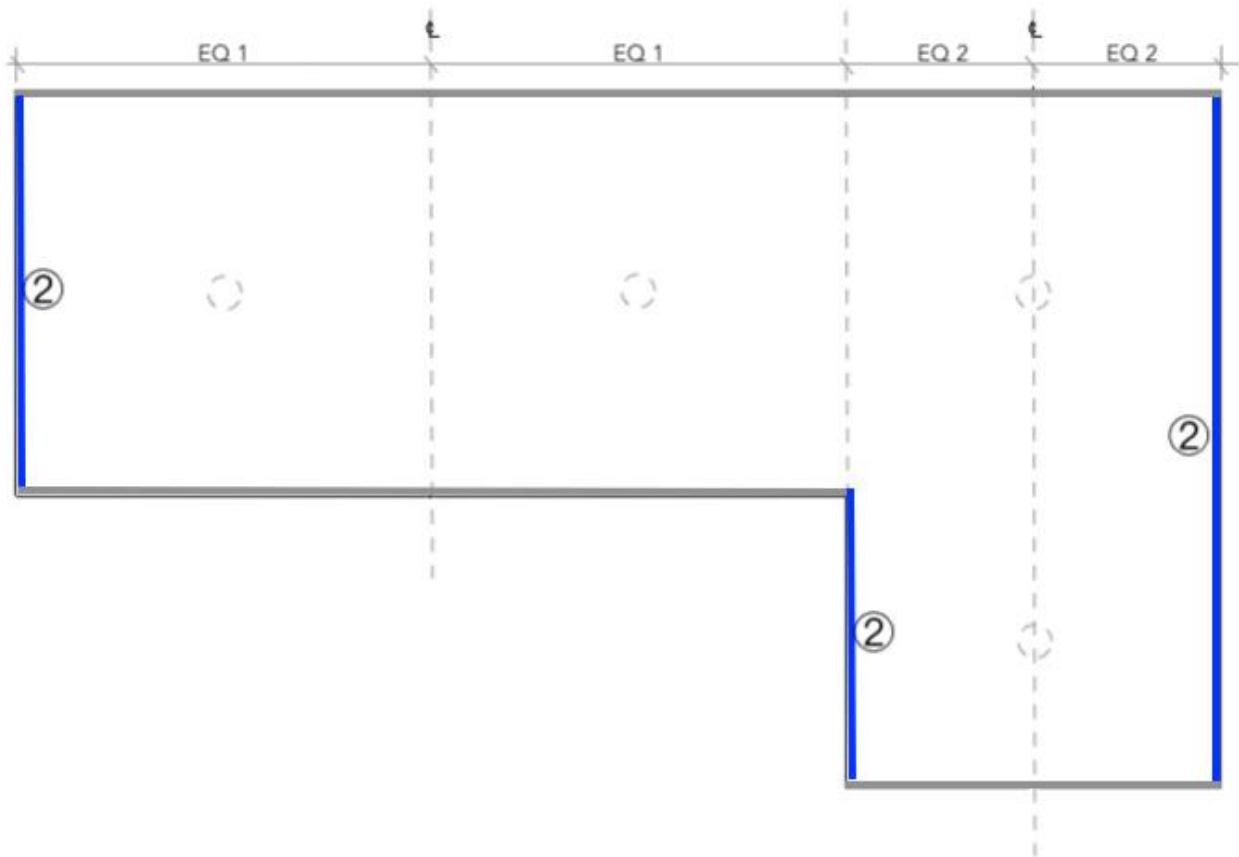
Install J-Track or Two Piece J-Track along the perimeter edges, where perpendicular to the plank orientation.





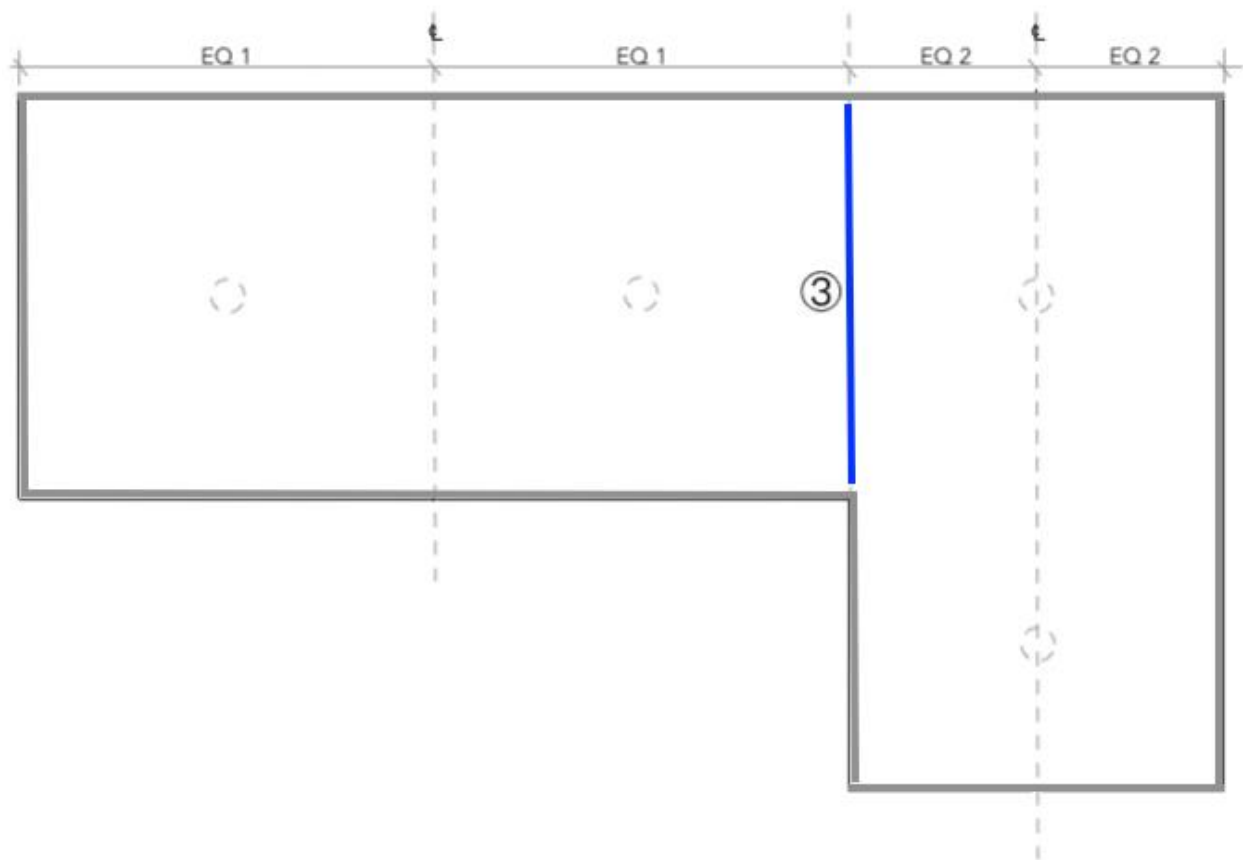
### 3.2.②. - Termination Set

Install the Termination Set (base only) along the end terminations where parallel to the planks.



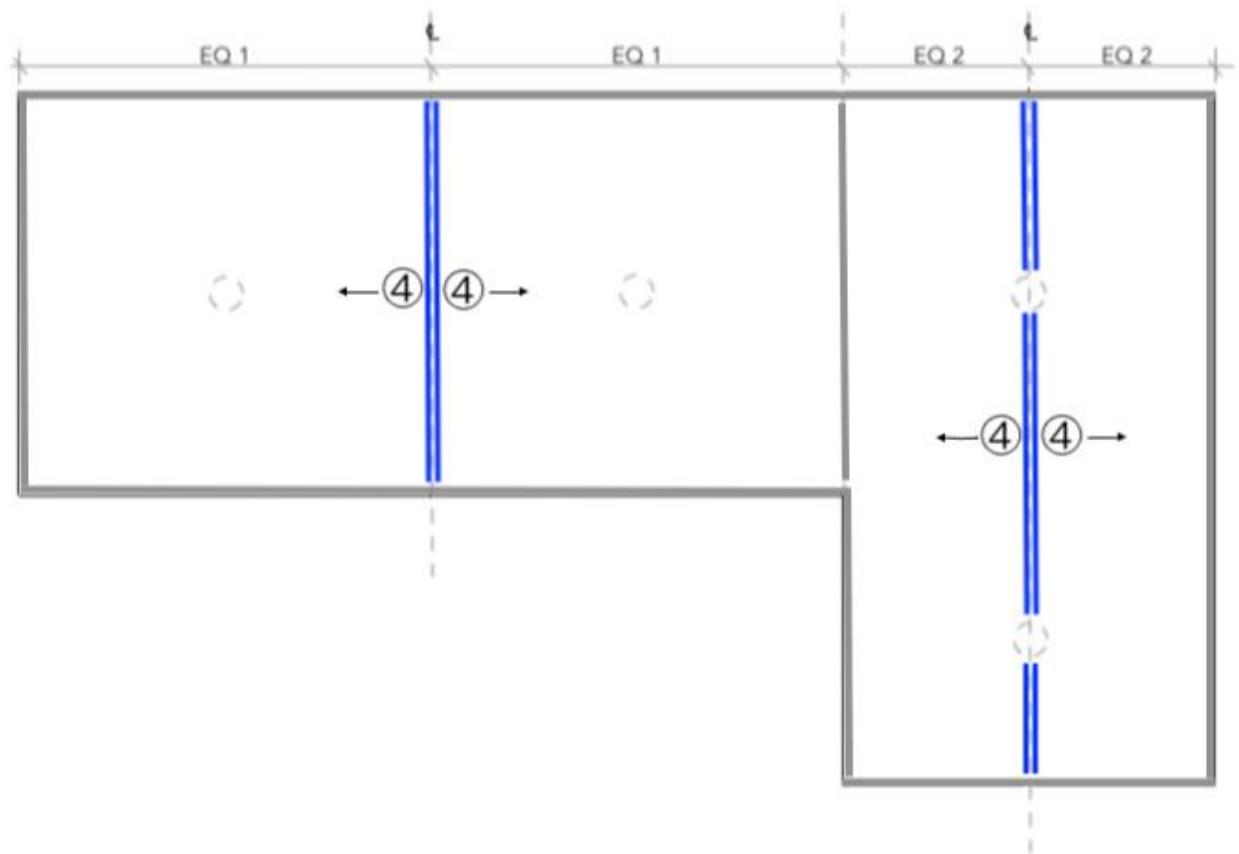
### 3.2.③. - Expansion Reveal

Where temperature range is a factor, this step is required and good practice even if no temperature range exists and where the ceiling finish changes direction. Install the Base for the Traditional Flat Reveal Set/Traditional U-Reveal Set every 24' (7.3m)(no butt-joints) or every 40' (12.2m)(with staggered butt-joints). Where using the Craftsman U-Reveal Set, install this component every 12' (3.7m). Where using the Precision Flat Reveal, install this component every 6' 8" (2m). Ensure the Base is landing on a solid substrate sufficient to hold the fasteners.



### 3.2.④. - Starter

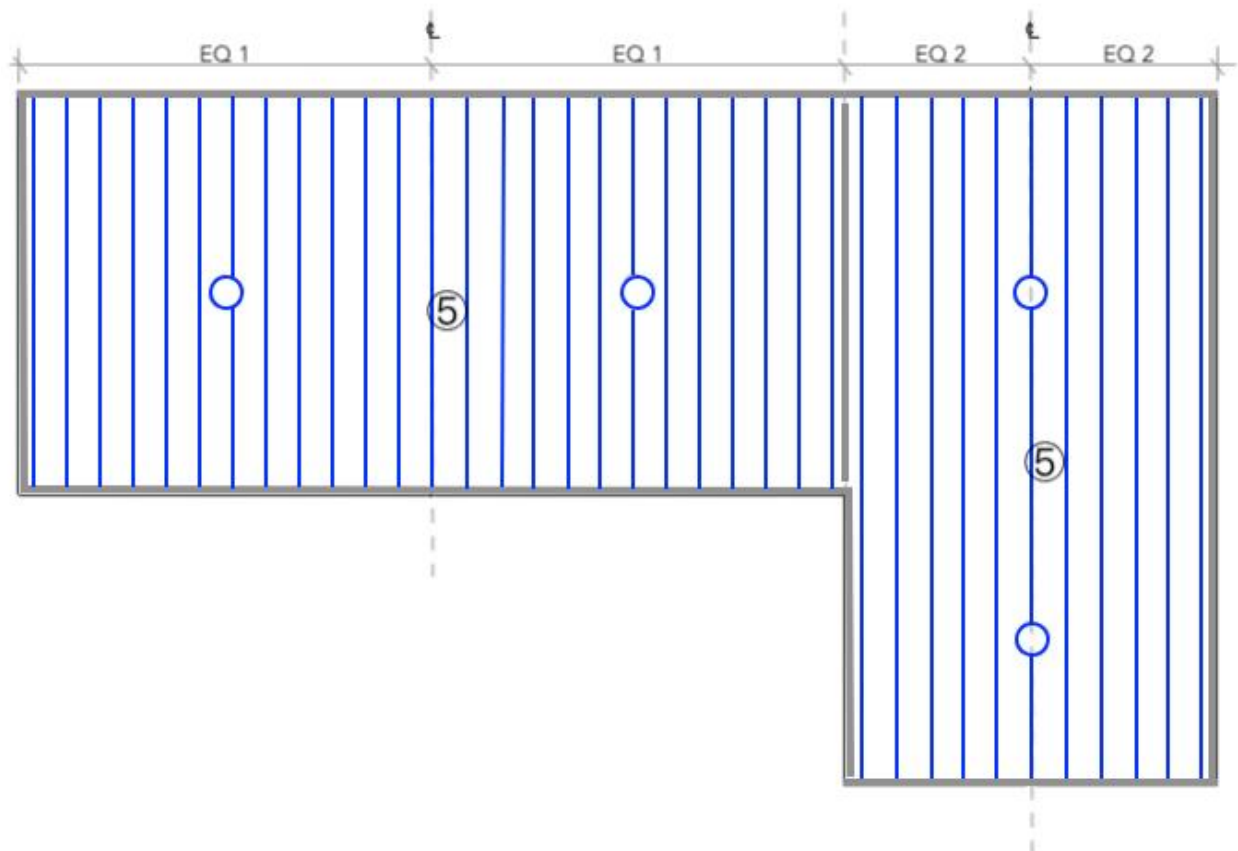
Install two (2) Starters back-to-back along the center lines of each ceiling area or offset from center by half a plank width, to finish with equal width planks at each side of the area(s). If equal width planks are not preferred or using Channel plank profile, install a single (1) Starter or Starter J-Track at one side of each area.



### 3.2.⑤. - Planks

Install the first row of planks, engaging with the tongue of the Starter. Check for an aligned/square & flat installation, shim Quick-Screen Clips where needed to correct any substrate inconsistencies. Layout and cut planks around lighting fixtures and other penetrations.

**TIP!** It is good practice to check your installation every 2-3 rows for alignment/flat/straight, for best results.

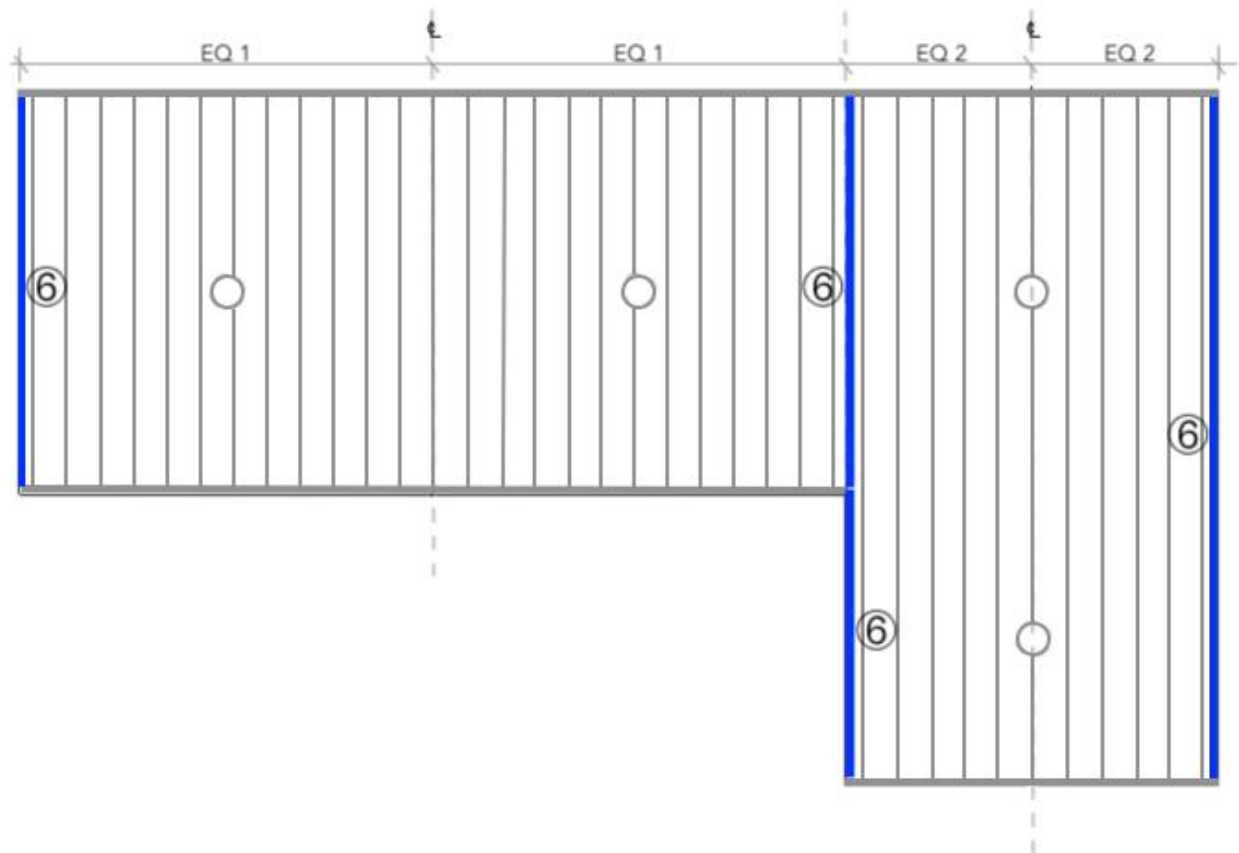




### 3.2.⑥. - Component Caps

Install all caps: Flat Reveal Set, U-Reveal Set, Two Piece J-Track, Termination Set.

Use a rubber mallet, hammer and block etc. to protect the finish during this process.



## 4.0. Cleaning Recommendations


*\*see Cleaning Guide for full requirements*

[longboardproducts.com](http://longboardproducts.com)

While Longboard finishes require zero maintenance, we do recommend periodic cleaning to keep the product looking its best. Our finish is tested to withstand corrosion, fading and normal wear, however, neglect and rough conditions could have negative effects on the surface finish. These effects will not negate the structural performance of the product, but prolonged exposure to these conditions may result in permanent markings or surface damage.

Cleaning should be done in mild weather, and never in direct sunlight. Always complete a test patch on an inconspicuous area to ensure your detergent is suitable for the surface.

Your Longboard products should be cleaned immediately after installation. This is to remove any construction soils such as oils or dust. How to complete this initial cleaning depends on the level of dirt and the nature of the soil. See the cleaning guide for our suggestions based on soil level. Basic methods use a combination of moderate water pressure, soft sponge/brush and a mild detergent.


 NEVER use aggressive acid or alkaline cleaners on Longboard finishes. Do not use cleaners containing Trisodium Phosphate, Phosphoric Acid, Hydrochloric Acid, Hydrofluoric Acid, Fluorides or any other compound that is known to react with metal.

Always follow the product instructions for dilution. Cleaning the surface with a cleanser that is not diluted may result in damage to the coating.

## 5.0. WARRANTY

Upon substantial completion of the project, register for warranty online here:


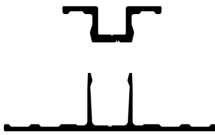
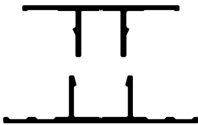


[longboardproducts.com/warranty](http://longboardproducts.com/warranty)

 Registration is required for the warranty to be in effect.









# APPENDIX

INSTRUCTION STEP #	IMAGE	DESCRIPTION	TYPICAL USE
①		PRECISION J-TRACK, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	PERPENDICULAR TO PLANKS AROUND PENETRATIONS & END CONDITIONS
① ⑥		TRADITIONAL TWO PIECE J-TRACK, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	PERPENDICULAR TO PLANKS, USED AS AN EDGE TERMINATION COMPONENT. 24' (7.3m) MAX*. BETWEEN COMPONENTS. <i>*40' (12.2m) max. where staggered butt-joints are used</i>
① ⑥		PRECISION TWO PIECE J-TRACK, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	PERPENDICULAR TO PLANKS, USED AS AN EDGE TERMINATION COMPONENT. 6' 8" (2m) MAX. BETWEEN COMPONENTS.
② ⑥		TRADITIONAL TERMINATION SET, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	PARALLEL TO PLANKS, USED AS AN EDGE TERMINATION COMPONENT
② ⑥		PRECISION TERMINATION SET, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	PARALLEL TO PLANKS, USED AS AN EDGE TERMINATION COMPONENT

INSTRUCTION STEP #	IMAGE	DESCRIPTION	TYPICAL USE
③ ⑥		TRADITIONAL U-REVEAL SET, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	EXPANSION COMPONENT IN THE FIELD OF THE CEILING AREA, PERPENDICULAR TO PLANKS & CORNERS WHERE CEILING PLANKS CHANGE DIRECTION. 24' (7.3m) MAX*. BETWEEN COMPONENTS. <i>*40' (12.2m) max. where staggered butt-joints are used</i>
③ ⑥		CRAFTSMAN U-REVEAL SET, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	EXPANSION COMPONENT IN THE FIELD OF THE CEILING AREA, PERPENDICULAR TO PLANKS & CORNERS WHERE CEILING PLANKS CHANGE DIRECTION. 12' (3.7m) MAX*. BETWEEN COMPONENTS.
③ ⑥		TRADITIONAL FLAT REVEAL SET, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	EXPANSION COMPONENT IN THE FIELD OF THE CEILING AREA, PERPENDICULAR TO PLANKS & CORNERS WHERE CEILING PLANKS CHANGE DIRECTION. 24' (7.3m) MAX*. BETWEEN COMPONENTS. <i>*40' (12.2m) max. where staggered butt-joints are used</i>
③		PRECISION FLAT REVEAL, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	EXPANSION COMPONENT IN THE FIELD OF THE CEILING AREA, PERPENDICULAR TO PLANKS & CORNERS WHERE CEILING PLANKS CHANGE DIRECTION. 6' 8" (2m) MAX. BETWEEN COMPONENTS. BUTT-JOINTS IN PLANKS SHOULD <u>NOT</u> BE USED.
④		STARTER, 12' (3.7m) LENGTHS, MILL FINISH (RAW ALUMINUM), WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	PARALLEL TO THE STARTING PLANK



INSTRUCTION STEP #	IMAGE	DESCRIPTION	TYPICAL USE
④ ⑤		QUICK-SCREEN CLIP, 316 STAINLESS STEEL	PLANK & STARTER ATTACHMENT CLIP (USE #8 SCREW, SUPPLIED BY OTHERS)
⑤		2-½" V-GROOVE CEILING PLANK, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	CEILING PLANK
⑤		2-½" V-GROOVE PERFORATED CEILING PLANK, 12' (3.7m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	PERFORATED CEILING PLANK
⑤		4" V-GROOVE CEILING PLANK, 24' (7.3m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	CEILING PLANK
⑤		6" V-GROOVE CEILING PLANK, 24' (7.3m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	CEILING PLANK
⑤		6" CHANNEL CEILING PLANK, 24' (7.3m) LENGTHS, WOODGRAIN, SOLID, SPECIALTY, CUSTOM SOLID	CEILING PLANK

Distributed by:



p: 1-866-716-2436

e: info@facadespec.com

w: facadespecialtiesinc.com